

WIKSTROEMIA PERDITA DEG. & DEG., AN EXTINCT (?) ENDEMIC
OF A PARADISE LOST BY EXOTIC PRIMATES

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The genus Wikstroemia of the Thymelaeaceae, as occurring in the Hawaiian Archipelago, was studied by Dr. Carl Johan Fredrik Skottsberg (12/1/80-6/14/63) of Göteborg, Sweden, in the field in 1922, 1926, 1938 and 1948. His early studies were continued in great detail with the loan from about thirty institutions of over 600 historical numbers of which many have been exterminated in this Bulldozer Age of Biotic Destruction. He recognized 38 named taxa before his death; the major part of his study had ended less than a year before, as his letter indicates.

Skottsberg's handwritten manuscript was completed and posthumously published by Bo Peterson of the "Botaniska Museet, Göteborgs Universitet" who, according to his letter dated March 17, 1973, plans "to be able to publish some additions - - - and to make up a key for the species." We corrected the almost perfect English text, paying particular attention to the confused spelling of Hawaiian names before publication of the monograph as "The Genus Wikstroemia Endl. in the Hawaiian Islands." Acta Regiae Societatis Scientiarum et Litterarum Gothoburgensis. Bot. 1:1-166. 1972.

Driving in our jeep last January along the coastal road, Hawaii Volcanoes National Park, toward Wahaula heiau (temple) in search of ephemeral, halophytic Panicum species, we were amazed to see mauka (mountainward) fresh gashes in an endemic jungle never penetrated by botanists before. Reaching there late in the afternoon, we discovered the gashes represented a cleanly bulldozed grid evidently for paved roads in preparation for the sale of house lots. With all workmen gone for the day, we searched for possible botanical prizes. Among the bruised tangle of rare and even unknown taxa, such as a form of maile, Alyxia oliviformis, newly described under an archaic specific name in Phytologia 32:377-385. 1975, we unearthed a single graceful akia lying uprooted on the ground. Even though the butting of the bulldozer had knocked off most of its nocturnal flowers, we saved many of the twigs for museums of the world. We can only wonder what intricate chemicals this plant could synthesise - a plant of a genus cherished for its unique qualities in heathen days for stupefying and catching fish, and for eliminating hated enemies. Even though we failed to find a pistillate specimen, we here name and describe this single akia tree thus far known to us as:

WIKSTROEMIA PERDITA Deg. & Deg., sp. nov. Planta mascula solum cognita: Arbor usque 5 m. alta, glabrata; ramulis gracilibus; inter-

Larso, Sweden, July 30, 1962

My dear Degener,

Thanks very much for the clipping and for the new Flora leaves. The hunting program is a scandal and I cannot understand that it didn't meet with crushing resistance from the conservation people in U.S.A. Mind you, Hawaii is a state now and nothing like this brutality would pass in any other state.

Among the addresses to the Flora were two new Canavalias. I see that you have distributed material to a number of herbaria, all perhaps not very important and I am sorry that you came not to think of Stockholm, where I have tried to build up a representative Hawaiian collection. Lots of paramount things are this messeng

Yesterday I finished the analysis of the last Wikstroemias you sent me. As I told you I cannot handle any more now, as I have to get the MS ready.

Best wishes

As ever

Stottberg

nodis usque 5 cm. longis. Petiolus 5-10 mm. longus; lamina lanceolata, 40-100 mm. longa, 15-25 mm. lata; basi obtusata; apice acuminata. Rhachis 3-5 mm. longa. Flores strigosi; tubus 44 mm. longus; lobi externi 1.5 mm, interni 1 mm. Pistillodium 1 mm. longum; ovario $\frac{1}{2}$ base nudo, $\frac{1}{2}$ apice densiusculo-setoso.

Staminate plant (pistillate presently unknown) a slender glabrate strict openly twiggy tree 5 meters tall, with 4 cm. thick trunk and smooth reddish brown bark. Leaves distant, in bud antrorsely yellow-puberulent but soon glabrous or nearly so; petiole thin, 5-10 mm. long; blade chartaceous, lanceolate, 4-10 cm. long, 13-25 mm. wide, entire, green and with narrow impressed midrib above, pale green with somewhat salient midrib and prominent veins beneath, acute to acuminate at apex, broadly obtuse at base. Inflorescence long marcescent; peduncle barely 1 mm. thick, antrorsely yellowish puberulent as is rachis, straight but in age retrorsely curved, 2-4 to very rarely 10 mm. long; rachis 1.5 mm. thick, 3-5 to rarely 7 mm. long, unbranched, straight or nearly so, with 25-75 thick minute pedicels from which all nocturnal flowers have been shed except a terminal cluster of 2-5 open ones and up to 20 in various stages of immaturity. Flowers greenish yellow, densely puberulent with antrorse yellowish hair without but glabrous within; tube 4 mm. long; lobes spreading, suborbicular, irregularly crenulate, the outer two 1.5 mm. long and almost as wide but the inner two 1 mm. long and as wide. Stamens with outer pair of oblong anthers extending to apex of tube, inner pair separated by half an anther length below. Aborted pistil 1 mm. long, clavate, lower half glabrous, upper half densely beset with stiff antrorse hair. Hypogynous scales 2, one third length of pistil, ligulate, at apex somewhat acute and entire or somewhat truncate and emarginate.

Type Locality: Known only from "Deg. & Deg. 33,680. (Single staminate 5 meter tree.) *Kalama mauka just beyond Nat. Park Boundary NE of Wahaula, Puna, Hawaii. Bulldozed *Metrosideros* forest at 1,300 feet. Jan. 23, 1976." Holotype at New York; isotypes widely distributed.

Before the Polynesians discovered the Hawaiian Archipelago several thousand years ago (Phytologia 29:242-246. 1974.), we estimated the endemic Angiosperm flora to have numbered about 50,000 well-recognizable taxa; by the time Capt. Cook rediscovered them in 1778 the endemics had declined to about half that number. With the advent of the bulldozer and the unwitting introduction of exotics, animals as well as plants, the extermination of our endemic plants and the endemic animals dependent upon them for food and shelter is progressing at frightful speed.

*The orthography was corrected to "Pulama" on all labels before distribution.



PLANTS OF HAWAII
EX HERBARIUM DEGENER

33,680

Wikstroemia perdit Deg. & Deg.
(shrub 8-5 meter high)
Kalama Maunaloa just beyond Nat. Park
Boundary NE of Waikaloa, Puna, Hawaii
Bulldozer Metrosideros forest
at 1,300 feet. Jan. 23, 1976

Holotype

Though we are here primarily concerned with Wikstroemia perdita as an example of extermination before our very eyes, we might mention that of the 47 species and 38 subspecies or varieties of endemic birds that enlivened our islands, 22 have become extinct within the last 200 years! The reduction in number of the plants producing their food, such as the red, one-seeded fruit of the akia, is one of the main reasons.

The important factor for the ever-increasing disappearance of the local biota is the poor record up to now of our public schools (Hon. Adv., 1/29-29/76), particularly in the teaching of biology and its appreciation. As a result the State is threatened by biologically ignorant and by tourist-ignoring residents who advocate "the conversion of 5,000 rural acres each year into plantings for commercial timber operations (2/4/76)." That means the destruction of our fascinating, biologically incompletely explored jungles for replacement with Australian eucalyptus and Mainland evergreens! These residents maintain that "Hawaii's forests could support after 30 years, a timber industry generating 1,900 jobs and providing an annual net return of nearly \$10 million, according to a State report released yesterday (3/24/76). The report noted that almost half of Hawaii's land is in forest and it concluded that half of that - one million acres - is capable of producing a usable timber crop."

Those materialists who are impressed by the questionable promise "of an annual net return of nearly \$10 million" thirty years hence from timber should ponder H.N. Moldenke's statement (4/16/76) that "The Hawaiian Islands rank with such other islands as Mauritius and Madagascar in the high percentage of endemism among their flora and fauna. In Mauritius and Madagascar thoughtless men have just about completely decimated their natural heritage (which explains in part why so few scientists, and tourists in general, visit them anymore)." We are gratified Dr. Skottsberg did not live to see such vandalism as the more recent destruction of acres of the endemic, nightblooming Caparis sandwichiana DC., and the brilliant Wikstroemia pulcherrima Skottsberg., (Acta Horti Gotob.10:140. 1936.) and its var. petersoniani Deg. & Deg. (Phytologia 24:151. 1972.).

We appeal, again, to the botanists of the world to come to this Mecca threatened by lumbering advocates. They should hunt for the unknown pistillate tree of W. perdita and collect, preserve, and record as much of the Hawaiian flora as is still extant so that future, better educated generations shall understand what a splendid Paradise the Islands had been before we idiotic 'Primates' destroyed it for evermore.